

WANDOOR GANITHAM - S S L C UNIT TEST 2021

10.9BE

GEOMETRY AND ALGEBRA – ANSWER KEY

Qn no.	Key	Score	
1	<p>a) $\frac{0-6}{x-2} = \frac{3}{2} \implies (-2,0)$</p> <p>b) $\frac{y-6}{0-2} = \frac{3}{2} \implies (0,3)$</p>	1 1	2
2	<p>a) $(2+5-6, 6+4-7) = (1,3)$</p> <p>b) $(2+6-5, 6+7-4) = (3,9)$</p>	1 1	2
3	<p>a) $\tan 45^\circ = 1$</p> <p>b) $\frac{m-0}{3-0} = 1 \implies m = 3$</p> <p>c) $\frac{7-0}{n-0} = 1 \implies n = 7$</p>	1 1 1	3
4	<p>a) $(\frac{1+9}{2}, \frac{4+8}{2}) = (5,6)$</p> <p>b) $(\frac{1+3}{2}, \frac{8+2}{2}) = (2,5)$</p> <p>c) $\sqrt{(5-2)^2 + (6-5)^2} = \sqrt{10}$</p>	1 1 1	3
5	<p>a) $AB = \sqrt{(5-2)^2 + (0-3)^2} = \sqrt{18}$</p> <p>c) $BC = \sqrt{(7-5)^2 + (8-0)^2} = \sqrt{68}$</p> <p>$AC = \sqrt{(7-2)^2 + (8-3)^2} = \sqrt{50}$</p> <p>$AB^2 + AC^2 = 18 + 50 = 68 = BC^2$</p> <p>c) Midpoint of BC = $(\frac{5+7}{2}, \frac{0+8}{2}) = (6,4)$</p>	1 1 1 1 1	5

6	a) $\frac{1-0}{6-2} = \frac{1}{4}$	1	5
	b) $\frac{5-4}{5-1} = \frac{1}{4}$	1	
	c) $\frac{4-0}{1-2} = -4$	1	
	d) $\frac{1}{4} \times \left(\frac{5-1}{5-6}\right) = -1$	1	
	e) $\left(\frac{5-0}{5-2}\right) \times \left(\frac{4-1}{1-6}\right) = -1$	1	

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